Q Z X

The Journal Covering Amateur Radio and Sinclair Computers
ZX80; Micr0-Ace; ZX81; TS1000, 1500, and 2068; QL; Z88
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EDITOR'S NOTES

K5XY

The new newsletter for the ZX81 I mentioned last month is quite interesting. It is entirely devoted to the ZX81 (and TS1000, the TS1500 is not mentioned). The most distinctive feature of the publication is the graphics. There are a lot of them and they are good. All produced on a ZX81 too. The issue that I have seen contains programing hints and other useful information. For a sample issue contact Andre Braune, 304 Scott, Chateauguay, Quebec, Canada, J6J 4H5. He requests a self-addressed stamped envelope. The latter request may present some difficulties if you do not have access to Canadian postage stamps. Canadian postage is about $0.50. You might try sending him several US 40 ¢ stamps not attatched to the envelope so he could use them when requesting information from somebody in the United States.

Well this month I have finally caught up enough that QZX is at least being mailed in the correct month.

UNCLASSIFIED ADS

WANTED: UNCLASSIFIED ADS for publication in QZX. Cost is 1 cent for each keystroke (characters, blanks, etc.). Payment must be included with order. This is an excellent way to sell your program or unwanted equipment, ask for help, or find a specific program. Send your ad with payment to QZX, 2025 O'Donnell, Las Cruces, NM 88001.

QZX discount: 15% discount on all orders mentioning QZX. T & C Services (address in ad in this issue.)

FREE: One Byte-Back M 16 16 K RAM (no printed circuit board on the feed through socket). Contributed by KA8THG. It would be appreciated if a contribution toward the mailing expenses were made. Send requests to QZX, 2025 O'Donnell, Las Cruces, NM 88001.

FOR SALE: Back issues of QZX, $1.50 each postpaid. Special during April only: any issues from those months showing an M in the article in this issue will be sent postpaid for $0.20 each. QZX, 2025 O'Donnell, Las Cruces, NM 88001.

FOR SALE: CP/M books. Almost new. Half original price. *The Programmer's CP/M Handbook* by Andy Johnson-Laird. Osborne. Hardback. 500 pages $419. *The Byte Guide to CP/M* by Mark Dahmke. Mc Graw Hill. 250 pages. $8.50. *CP/M Users Guide* by Thom Hogan. Osborne. 330 pages. $8.95. *The CP/M Plus Handbook* by Alan R. Miller. Sybex. 250 pages. $7.5. *Inside CP/M Plus* by David E. Cortesi. Holt-Rinehart. 260 pages. $9.25. *CP/M Bible* by Waite and Angermeyer. Howard Sams. 430 pages. $9.90. *Users Guide to CP/M Systems* by Bove and Rhodes. Baen. 300 pages. $4.50. $1.00 each shipping and handling. A. F. Burr, 2025 O'Donnell, Las Cruces, NM 88001.

QZX BACK ISSUES

I just took an inventory of the back issues of QZX which are stored in my shed. The results are given in the table at the end of this article. Now is a good time to fill in any gaps in your set. Because I have more copies than I have room, for the month of April only there is a special offer - any number of issues you want from the months marked with an M for 20 cents each, post paid.

The News is Out!
And We're Spreading It!
RMG is adding so many NEW and EXCITING TIMES to our line that our storerooms are BULGING! We have added more than 25 NEW PAGES and changed over 20 others in our BIG 40+ page catalog. We want to make sure that you do not miss jour on anything we may be able to help you with in your computing.
If you will send us $3.00 you will recieve our catalog with a $3 off coupon for your first order. AND, send along 12 business size SASE's and you will recieve 12 monthly updates and special mailings. $5 discount coupon in first mailing!

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QZX BACK ISSUES

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84									5	0	M	0
85	9	0	M	7	M	M	M	8	M	M	M	M
86	M	1	4	9	0	0	M	M	M	6	8	0
87	0	0	M	M	M	M	M	M	M	M	M	M
88	M	M	M	M	M	3	2	1	0	2	2	2
89	2	4	2	0	5	5	3	6	2	4	1	0
90	9	6	M	M	9	5	4	2	5	9	0	4
91	8	4	5	8	6	M	4	8	8	7	6	9
92	8	7										

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TS2068 JOYSTICK OPERATION

The two joysticks are controlled via Register 14 (I/O Port A) of the Programmable Sound Generator Chip (see Sections 2.1.6 and 2.1.7). Address and data are passed via Ports 0F5H and 0F6H respectively. The joysticks are read by first addressing Register 14 in the PSG by writing a 14 (0EH) to Port 0F5H. The data is then read by executing an IN from Port 0F6H, having the port address in Z80 Register C and the joystick (player) number in Register B (number = 1 or 2). Note that PSG Register 7, Bit 6 is assumed to be zero, enabling I/O Port A for input. If you ever use I/O Port A for output (R7,B6=1), you will want to clear Bit 6 prior to any input operation.

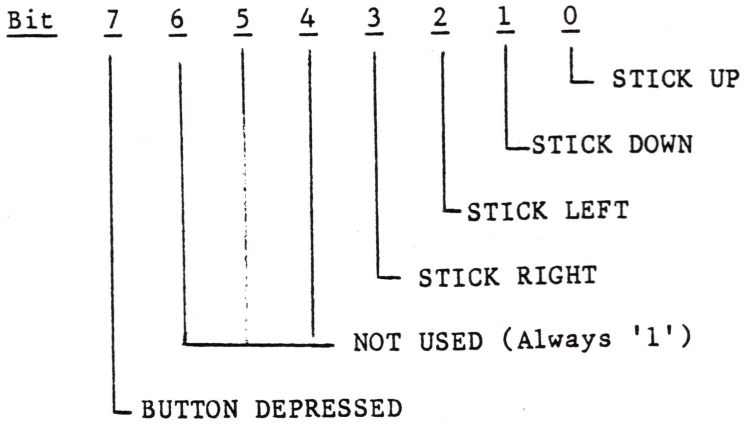
Sample routine:

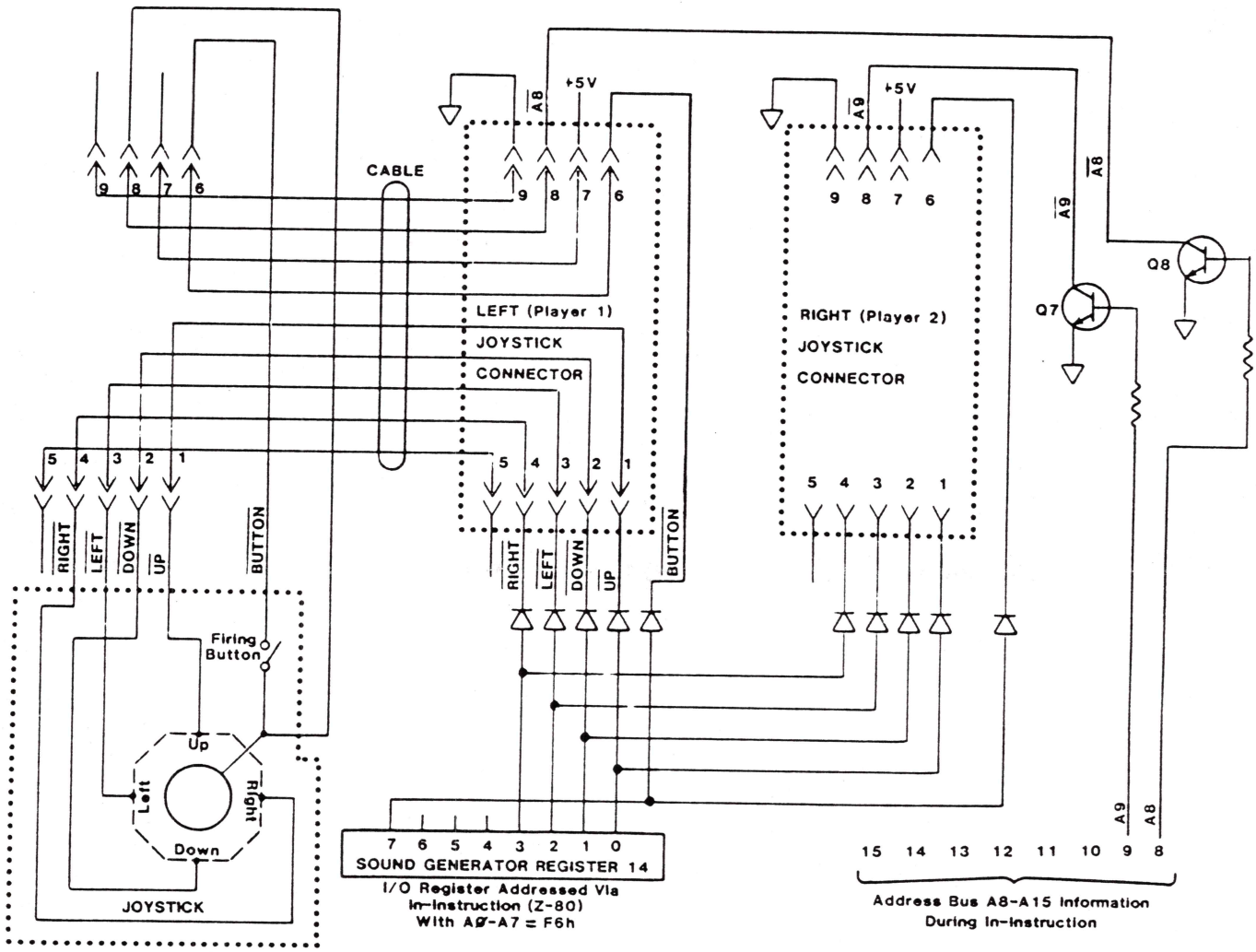
```
GETJOY  LD    A,0EH          Load A = 14
        OUT   A,(0F5H)       Address the joystick port
        LD    B,playerno
        LD    C,0F6H         Data Port address to C
        IN    A,(C)          Joystick data to A
        CPL                  Complement to High Active
        AND   8FH            Get significant bits
```

The data read is LOW ACTIVE, i.e. all bits = 1 (byte=FFH) when the stick is at center and the button is not depressed. Figure 4.3-1 shows the interpretation of the data byte.

FIGURE 4.3-1

JOYSTICK DATA





JOYSTICK PORT OPERATION

SAVINGS AND LOAD

K5XY

I have just been sent a very interesting booklet from L.I.S.T., the Long Island Sound Sinclair-Timex Group. It is entitled *Savings and Load of the Timex Computer.* I found it very interesting.

It is another in their series of booklets designed to collect in one place some of the useful technical information about the ZX81 series of computers. This booklet concentrates on the problems of saving and loading programs with tapes. One of the reasons our computers are so inexpensive is that Sinclair decided to use audio tape as the storage medium. In that way inexpensive media was readily available and, because ordinary audio recorders were cheap and available, the computer did not have to contain the required electronic and mechanical parts to record programs. The disadvantages, as we all know, were that the method is slow and unreliable. This booklet collects information which helps decrease these problems.

The lead off reprint is the best in the publication. It deals with tape recorder head alignment and provides as complete coverage of that subject as you can expect from four information packed pages. It even tells a bit about the actual signals put on the tape by the computer. Included are several short articles dealing with the amplitude of the recorded signals. There are suggestions for increasing the amplitude and suggestions on how to prevent too much amplitude.

Interestingly enough "turn down the volume control" is not one of these latter suggestions. This last sentence really is not fair. One article did contain the sentence "For best results use a lower volume setting when using the SIGNAL BOOSTER". Actually in some circumstances it does make sense to use a lower volume setting with a signal booster. If a low power tape recorder is run wide open its frequency response and distortion product output will suffer thus changing the shape of the data pulses. Some boosters can be thought of as impedance matching devices too.

The final topics covered are some short hints for better operation and a program to speed up the data transfer rate. Two short 1 K games are included too.

All of the material in the booklet consists of reprints from hard to get publications. One contribution even comes from long time QZX reader WA4BQE. The booklet consists of 13 single sided xeroxed sheets and is obtainable from

L.I.S.T.

5 Peri Lane

Valley Stream, NY 11581.

QZX FRIENDS

WB2USJ -- John was so anxious not to miss an issue of QZX that he called from the hospital the day after an operation to say that the check was coming. I hope that he gets home soon so that he can read QZX in comfort.

WA4BQE -- Ed has had some of his Sinclair writings reprinted by another user group. See the book review in this issue.

QL NOTES

K5XY

This article is a collection of notes on the QL, most of which have been gleaned for the newsletter of the New England Sinclair QL User Group, which is the largest QL users group in the United States. Peter Hale, the editor of there newsletter says that their public domain program library contains a packet radio program. He does not say much about it because it is written in French and does not have any documentation.

The programming language is Super-BASIC and, because both the compiled version and the source code are available, it would be relatively easy to translate the French prompts. Peter says that some one with a smattering of French and a knowledge of packet radio terminology could handle it. He would be willing to assist a knowledgeable user in making an English language translation.

Any QZX reader can get a free copy by sending a preformatted 1440 sector disk (3.5 of 5 1/4) or microcartidge with return postage. If you would prefer Peter to format, copy, and mail the program please send $5.00. The address is Peter R. Hale, NESQUG, Box 8763, Boston, MA, 02114-0037. Ask for disk IFE F005.

One of their members describes writing two programs of a couple of thousand lines each dealing with cloud simulation and climatology. He wrote them in SuperBASIC and compiled them with the Turbo compiler for use on the QL.He said that he could write about 50% more in the same time as he could using another language.

It is only fair to note that another person described the joys of using the new Gold card (about $500) and thereby experiencing the joys of an almost "normal" computer. There was another comment about the vastly superior music chip in the TS2068.

Finally it is reported that the new ED disk drives are available for the QL. In fact it is probably easier and cheaper to get these new drives for the QL than it is to get them for an MSDOS computer. These drives allow you to use the new ED disks that have a capacity of 3.2 megabytes. (The drives will also take the conventional DD and HD disks too.)

73, K5XY

QZX presents the best software & hardware projects available for the radio amateur. While the contents are believed to be accurate, no warranty is extended on any program or project. No investigation has been made of the claims or reputation of any advertiser. It would be greatly appreciated if all correspondence requiring an answer would be accompanied by a self-addressed stamped envelope (SASE). Copyright by QZX, 1992. All rights reserved, photocopying by permission only. ISSN 1055-1735

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